

Form PTO-1449

Docket Number 437252001200

Application Number 10/082,443

INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION

(Use several sheets if necessary)

Applicant

Mark R. ALVIS et al.

Filing Date: February 22, 2002

Group Art Unit: 4614-1653

Mailing Date: May 9, 2002

## U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
AM	1.	04/06/1976	3,949,073	Daniels et al.			
	2.	06/29/1976	3,966,908	Balassa			
	3.	02/20/1979	4,140,537	Luck et al.			
	4.	11/11/1980	4,233,360	Luck et al.			
	5.	02/10/1981	4,250,139	Luck et al.			
	6.	07/05/1983	4,391,749	Engvall et al.			
	7.	01/03/1984	4,424,208	Wallace et al.			
	8.	09/25/1984	4,473,551	Schinitsky			
	9.	04/15/1986	4,582,640	Smestad et al.			
	10.	10/27/1987	4,703,108	Silver et al.			
	11.	11/03/1987	4,704,273	McMichael			
	12.	07/26/1988	4,760,131	Sundsmo et al.			
	13.	08/16/1988	4,764,377	Goodson			
	14.	02/14/1989	4,804,745	Koepff et al.			
	15.	03/06/1990	4,906,670	Higashi et al.			
	16.	03/26/1991	5,002,071	Harrell			
	17.	07/30/1991	5,036,056	Kludas			
	18.	04/01/1997	5,616,689	Shenoy et al.			
	19.	06/17/1997	5,639,796	Lee			
	20.	07/04/2000	6,083,918	Klaus			
	21.	07/11/2000	6,087,355	Cho et al.			
	22.	12/26/2000	6,165,983	Klaus			
	23.	11/13/2001	6,316,015 B1	Rondelez et al.			
	24.	11/13/2001	6,316,033 B1	Lin			
AM	25.	11/27/2001	6,322,592 B2	Lucas et al.			

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26.	12/06/2001	Application No. 20010049366	Singh et al.			
27.	01/10/2002	Application No. 20020004499	Rudnic et al.			

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO
AM	28.	10/25/1989	EP 338813	EPO			
AM	29.	11/1981	SU 880426	Russia			X (Abstract)

## OTHER DOCUMENTS

(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
AM	30.	Altman, R. D. (1992) "Laboratory Findings in Osteoarthritis" Chapter 12 In <u>Osteoarthritis: Diagnosis and Medical/Surgical Management</u> , Moskowitz, Howell, Goldberg and Mankin, Eds., WB Saunders Co., Harcourt Brace Jovanovich, pp. 313-328.
	31.	Balazs, E.A. and Denlinger, J. L. (1989). "Clinical Uses of Hyaluronan" In <u>Biology of Hyaluronan</u> . John Wiley & Sons, 143:265-275.
	32.	Batyrov, T.U. et al. (March-April 1982). "Experimental Study of the Local Anesthetic Action of Trimecaine Prolonged with Collagen," <i>Stomatologiya</i> 61(2): 7-10. (English Abstract).
	33.	Bentz, H. et al. (1998). "Improved Local Delivery of TGF-β2 by Binding to Injectable Fibrillar Collagen Via Difunctional Polyethylene Glycol," <i>J. Biomed. Mater. Res.</i> 39:539-548.
	34.	Brahn, E. (April 1991). "Animal Models of Rheumatoid Arthritis: Clues to Etiology and Treatment," <i>Clin. Orthop. and Related Research</i> . 265:42-53.
	35.	Capaldi, M. J. and Chapman, J.A. (1982). "The C-Terminal Extrahelical Peptide of Type I Collagen an Its Role in Fibrillogenesis <i>In Vitro</i> ," <i>Biopolymers</i> 21:2291-2313.
	36.	Carron, H. (April 1978). "Relieving Pain with Nerve Blocks," <i>Geriatrics</i> 49-52,57.
	37.	Cepeda, M. S. et al. (1997). "Pain Relief After Knee Arthroscopy: Intra-Articular Morphine, Intra-Articular Bupivacaine, or Subcutaneous Morphine," <i>Reg. Anesth.</i> 22(3):223-238. 233-238
AM	38.	Cooperman, L. et al. (1984). "The Immunogenicity of Injectable Collagen I. a 1-Year Prospective Study," <i>J. of the Am. Acad. Dermatol.</i> 10:638-646.

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Group Art Unit: ~~4614~~ /653

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- AM
39. Creamer, P. et al. (1996) "Pain Mechanisms in Osteoarthritis of the Knee: Effect of Intraarticular Anesthetic," *The J. of Rheumatol.* 23:1031-1036.
  40. De Andres, J. et al. (1998). "Intra-Articular Analgesia After Arthroscopic Knee Surgery: Comparison of Three Different Regimens," *Eur. J. of Anaesth.* 15:10-15.
  41. Debruyne, D. et al. (1985). Monitoring Serum Bupivacaine Levels During Arthroscopy," *Eur. J. of Clin. Pharmacol.* 27:733-735.
  42. DeLustro, F. et al. (1987). "Reaction to Injectable Collagen: Results in Animal Models and Clinical Use," *Plast. Reconstruct. Surg.* 79:581-592.
  43. DeLustro, F. et al. (July 1988). "Immunity to Injectable Collagen and Autoimmune Disease: A Summary of Current Understanding," *Dermatol. Surg. Oncol.* 14(Suppl. 1)(7):57-65.
  44. Frank, D. H. et al. (June 1991). "Human Antibody Response Following Multiple Injections of Bovine Collagen," *Plast. Reconstruct. Surg* 87(6):1080-1088.
  45. Fraser, R. E et al. (June 1993). "The Kinetics of Hyaluronan in Normal and Acutely Inflamed Synovial Joints: Observation With Experimental Arthritis in Sheep," *Sem. Arthritis and Rheumatism* 22(6)( Suppl. 1):9-17.
  46. Frizziero, L et al. (1998). "Intra-Articular Hyaluronic Acid in the Treatment of Osteoarthritis of the Knee: Clinical and Morphological Study," *Clin. and Exp. Rheumatol.* 16:441-449.
  47. Gelman, R. A et al. (November 1979). "Collagen Fibril Formation *In Vitro*," *J. Biol. Chem.* 254:11741-11745.
  48. Gradinger, R. et al. (June 1995). "Influence of Various Irrigation Fluids on Articular Cartilage," *Arthroscopy: The Journal of Arthroscopic and Related Surgery* 11(3):263-269.
  49. Henderson, R. C. et al. (1990). "Postarthroscopy Analgesia with Bupivacaine: A Prospective, Randomized, Blinded Evaluation," *The Am. J. of Sports Med.* 18(6):614-617.
  50. Horakava, P. Z. et al. (1967). "Prolongation Par Les Substances Collagènes De *Thérapie* 22(6): 1455-1460. (English Abstract)
  51. Kaeding, C. et al. (1990). "Bupivacaine Use After Knee Arthroscopy: A Pharmacokinetics and Pain Control Study," *Arthroscopy: The Journal of Arthroscopic and Related Surgery* 6(1):33-39.
  52. Konobevtsev, O. et al. (1982). "Local Anesthetic Effect of Trimecaine Prolonged by Collagen," *Stomatologiya* 61(5): 7-9. (English Abstract).
  53. Konobevtsev et al. (1986). "New Drug Forms of the Local Anesthetic Pyormecaine," *Anaesteziol Reanimatol* 0(3): 50-52. (English Abstract)
  54. Kroesen, S. et al. (2000). "Induction of an Acute Attack of Calcium Pyrophosphate Dihydrate Arthritis by Intra-Articular Injection of Hylan G-F 20 (Synvisc). *Clin. Rheumatol.* 19:147-149.
  55. Mah, E. T. et al. (1991). "Effects of Irrigation Fluid on Human Menisci: An Experimental Comparison of Water, Normal Saline and Glycine," *The Journal of Arthroscopic and Related Surgery* 7(1):24-32.
- AM

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56. Marshall, G. J. et al. (1988). "Synovisol as an Irrigant for Electrosurgery of Joints," *Arthroscopy: The Journal of Arthroscopic and Related Surgery* 4(3):187-193.
57. Marshall, K. W. et al. (2000). "Amelioration of Disease Severity by Intraarticular Hyal Therapy in Bilateral Canine Osteoarthritis," *The J. of Orthop. Res.* 18:416-425.
58. McCain, J. P. et al. (1989). "Preliminary Studies on the Use of a Viscoelastic Solution in Arthroscopic Surgery of the Temporomandibular Joint," *J. Oral Maxillofac. Surg.* 47:1161-1168.
59. McPherson, J. M. et al. (1988). "The Effects of Heparin on the Physicochemical Properties of Reconstituted Collagen," *Coll. Relat. Res.* 8(1):65-82.
60. Meinig, R. P. et al. (1988). "Plasma Bupivacaine Levels Following Single Dose Intraarticular Instillation for Arthroscopy," *The Am. J. of Sports Med.* 16(3):295-300.
61. Moya, F. (1981). "Treatment of Osteoarthritis of the Spine and Herpetic Neuralgia at the Pain Center, Mount Sinai Medical Center" In New Approaches to Treatment of Chronic Pain: A Review of Multidisciplinary Pain Clinics and Pain Centers. Ng, L. K. Y. ed., 36: 118-121.
62. Myers, L. K. et al. (1997). "Collagen-Induced Arthritis, An Animal Model of Autoimmunity," *Life Sci.* 61(19):1861-1878.
63. Noyes, F. R. and Westin-Barber, S. D. (February 1997). "Arthroscopic-Assisted Allograft Anterior Cruciate Ligament Reconstruction in Patients With Symptomatic Arthrosis," *Arthroscopy: The Journal of Arthroscopic and Related Surgery* 13(1):24-42. 24-32
64. Pavelka, K. et al. (June 1999). "Pain Reduction in Knee Osteoarthritis: A Novel Treatment Using Intra-articular Type I Collagen NeuVisc™ Synovial Fluid Supplement," Presented at *4th Congress of the European Federation of National Associations of Orthopaedics and Traumatology*, Brussels, Belgium. Total pages 2.
65. Pavelka et al. (September 1999). "Safety Following Intra-articular Injections of NeuVisc™ -Two Studies," *Fourth World Congress of the Osteo Arthritis Research Society International*, Vienna, Austria. total pages 2.
66. Piez, K. (1985). "Collagen", Encyclopedia of Polymer Science and Engineering: Cellular Materials to Composites. 2nd Ed., John Wiley & Sons. 3:699-727.
67. Rodeo, S. A. and Warren, R. F. (July 1996). "Meniscal Repair Using The Outside-To-Inside Technique," *Clin. Sports Med.* 15:469-481.
68. Rosenblatt, J. et al. (1989). "The Effect of Collagen Fiber Size Distribution on the Release Rate of Proteins from Collagen Matrices by Diffusion," *J. of Controlled Release* 9:195-203.
69. Rubin, A. L. et al. (February 1965). "Effects of Pepsin Treatment on the Interaction Properties of Tropocollagen Macromolecules," *Biochemistry* 4(2):181-190.
70. Shroeder-Tefft, J. A et al. (1997). "Collagen and Heparin Matrices for Growth Factor Delivery," *Controlled Release* 49:291-298.
71. Smith, I. et al. (1991). "Effects of Local Anesthesia on Recovery After Outpatient Arthroscopy," *Anesth. Analg.* 73:536-539.

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72. Solanki, D.R. et al. (1992). "Serum Bupivacaine Concentrations After Intraarticular Injection for Pain Relief After Knee Arthroscopy," *Arthroscopy* 8:44-47.
73. Steffen, C. et al. (1975). "Collagen-Induced Acute Synovitis in Collagen-Immunized Rabbits," *A. Immun.-Forsch. Bd.* 150:432-446.
74. Summary of Product Characteristics: Chirocaine® (Manufacturer: Abbott): 2 pages total.
75. Wallace, D. G. et al. (1986). "Multiple Denaturational Transitions in Fibrillar Collagen," *Biopolymers* 25:1875-1893.
76. Wasudev, G. et al. (1990). "Blood Levels of Bupivacaine After Arthroscopy of the Knee Joint," *Arthroscopy* 6(1):40-42
77. Weiss, C. et al. (1986). "The Role of Na-hylan in Reducing Postsurgical Tendon Adhesions," *Bull. Hosp. Jt. Dis. Orthop. Inst.* 46:9-15.
- ~~78. Weiss, C. et al. (1987). "The Role of Na-hylan in Reducing Postsurgical Tendon Adhesions: Part 2," *Bull. Hosp. Jt. Dis. Orthop. Inst.* 47:31-39.~~
79. Whately, J. S. et al. (March 2000). "The Effect of an Exogenous Fibrin Clot on the Regeneration of the Triangular Fibrocartilage Complex: An In Vivo Experimental Study in Dogs," *Arthroscopy* 16:127-136.

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(including author, title, Date, Pertinent Pages, Etc.)

Examiner Initials	Ref. No.	Title
AM	1.	Olsen, D. et al. (2003). "Recombinant Collagen and Gelatin for Drug Delivery," <i>Advanced Drug Delivery Review</i> 55: 1547-1567.
	2.	Ruszczak, Z. et al. (2003). "Collagen as a Carrier for On-site Delivery of Antibacterial Drugs," <i>Advanced Drug Delivery Review</i> 55: 1679-1698.
	3.	Sano, A. et al. (2003). "Atelocollagen for Protein and Gene Delivery," <i>Advanced Drug Delivery Review</i> 55: 1651-1677.
	4.	Toman, D. (2004). "Collagen Uses in Current and Developing Orthopaedic Therapies," <i>Methodologies Used in the Construction of Engineered Tissue</i> 33(5): 341-348.
AM	5.	Wallace, D. (2003). "Collagen Gel Systems for Sustained Delivery and Tissue Engineering," <i>Advanced Drug Delivery Review</i> 55: 1631-1649.

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